



Rev. 04/01

PATENTS  
Docket No. AEOMICA-11 CON

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Shannon et al.  
Application No.: 10/663,470  
Filed : September 15, 2003  
For : HUMAN GTP-RHO BINDING PROTEIN 2

Hon. Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL LETTER FOR  
INFORMATION DISCLOSURE STATEMENT

Sir:


Transmitted herewith is an Information Disclosure Statement in the above-identified application. This Statement is submitted:

- ☒ [X] within three months of the application filing date;
- ☐ [ ] more than three months from the application filing date but before the mailing date of the first Office Action on the merits.

In accordance with 37 C.F.R. § 1.97, submission of this Statement requires no fee. However, if for any reason a fee is due, the Director is hereby authorized to charge payment of any fees required in connection with this Information Disclosure Statement to Deposit Account

No. 06-1075. A duplicate copy of this letter is transmitted herewith.

Respectfully submitted,

November 17, 2003 

David A. Roise  
Registration No. 47,904  
Attorney for Applicants

FISH & NEAVE  
Customer No. 1473  
1251 Avenue of the Americas  
New York, New York 10020-1104  
Tel.: (650) 617-4000

I hereby Certify that this  
Correspondence is being  
Deposited with the U.S.  
Postal Service as First  
Class Mail in an Envelope  
Addressed to : HOW.  
COMMISSIONER FOR PATENTS,  
P.O. BOX 1450, Alexandria,  
VA 22313-1450 on:

11-17-03

Date of Deposit

Lorraine Cole

Name of Person Signing

  
Signature of Person Signing

11-17-03

Date of Signature



PATENTS  
AEOMICA-11 CON

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Shannon et al.  
Application No.: 10/663,470  
Filed: : September 15, 2003  
For: : HUMAN GTP-RHO BINDING PROTEIN 2

Hon. Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98,  
applicants hereby make the following documents of record in  
the above identified application: \*

U.S. Patents

|           |          |                     |
|-----------|----------|---------------------|
| 6,204,250 | 03/20/01 | Bot et al.          |
| 6,204,061 | 03/20/01 | Capecchi et al.     |
| 6,187,305 | 02/13/01 | Treco et al.        |
| 6,180,377 | 01/30/01 | Morgan et al.       |
| 6,180,370 | 01/30/01 | Queen et al.        |
| 6,162,963 | 12/19/00 | Kucherlapati et al. |
| 6,150,584 | 11/21/00 | Kucherlapati et al. |
| 6,124,128 | 09/26/00 | Tsien et al.        |
| 6,114,598 | 09/05/00 | Kucherlapati et al. |
| 6,110,898 | 08/29/00 | Malone et al.       |
| 6,096,865 | 08/01/00 | Michaels            |

---

\* Applicants reserve the right to challenge the status of any  
of the cited documents as prior art.

|           |          |                     |
|-----------|----------|---------------------|
| 6,090,919 | 07/18/00 | Cormack et al.      |
| 6,075,181 | 07/13/00 | Kucherlapati et al. |
| 6,066,476 | 05/23/00 | Tsien et al.        |
| 6,054,321 | 04/25/00 | Tsien et al.        |
| 6,054,297 | 04/25/00 | Carter et al.       |
| 6,051,831 | 04/18/00 | Koster              |
| 6,048,524 | 04/11/00 | Selden et al.       |
| 6,046,800 | 04/04/00 | Ohtomo et al.       |
| 6,042,549 | 03/28/00 | Amano et al.        |
| 6,027,881 | 02/22/00 | Pavlakakis et al.   |
| 6,025,201 | 02/15/00 | Zelmanovic et al.   |
| 6,017,897 | 01/25/00 | Li et al.           |
| 6,016,191 | 01/18/00 | Ramos et al.        |
| 6,013,256 | 01/11/00 | Light et al.        |
| 6,004,752 | 12/21/99 | Loewy et al.        |
| 6,004,744 | 12/21/99 | Goelet et al.       |
| 6,001,233 | 12/14/99 | Levy                |
| 5,990,689 | 11/23/99 | Poncon              |
| 5,985,847 | 11/16/99 | Carson et al.       |
| 5,984,175 | 11/16/99 | Popp                |
| 5,981,214 | 11/09/99 | Skoultchi           |
| 5,968,750 | 10/19/99 | Zolotukhin et al.   |
| 5,958,891 | 09/28/99 | Hsu et al.          |
| 5,945,339 | 08/31/99 | Holloman et al.     |
| 5,939,598 | 08/17/99 | Kucherlapati et al. |
| 5,930,143 | 07/27/99 | Savazzi             |
| 5,925,517 | 07/20/99 | Tyagi et al.        |
| 5,889,351 | 03/30/99 | Okumura et al.      |
| 5,888,983 | 03/30/99 | Kmiec et al.        |
| 5,880,104 | 03/09/99 | Li et al.           |
| 5,877,397 | 03/02/99 | Lonberg et al.      |
| 5,874,304 | 02/23/99 | Zolotukhin et al.   |
| 5,874,299 | 02/23/99 | Lonberg et al.      |
| 5,871,984 | 02/16/99 | Kmiec               |
| 5,869,619 | 02/09/99 | Studnicka           |
| 5,854,033 | 12/29/98 | Lizardi             |
| 5,846,726 | 12/08/98 | Nadeau et al.       |
| 5,843,913 | 12/01/98 | Li et al.           |
| 5,830,877 | 11/03/98 | Carson et al.       |
| 5,824,269 | 10/20/98 | Kosaka et al.       |
| 5,821,337 | 10/13/98 | Carter et al.       |
| 5,821,123 | 10/13/98 | Studnicka           |
| 5,814,318 | 09/29/98 | Lonberg et al.      |
| 5,807,715 | 09/15/98 | Morrison et al.     |
| 5,804,566 | 09/08/98 | Carson et al.       |
| 5,804,387 | 09/08/98 | Cormack et al.      |
| 5,795,972 | 08/18/98 | Kmiec               |
| 5,789,650 | 08/04/98 | Lonberg et al.      |

|           |          |                      |
|-----------|----------|----------------------|
| 5,783,674 | 07/21/98 | Geysen               |
| 5,780,296 | 07/14/98 | Holloman et al.      |
| 5,777,079 | 07/07/98 | Tsien et al.         |
| 5,770,429 | 07/23/98 | Lonberg et al.       |
| 5,770,196 | 06/23/98 | Studnicka            |
| 5,766,886 | 06/16/98 | Studnicka et al.     |
| 5,760,012 | 06/02/98 | Kmiec                |
| 5,756,325 | 05/26/98 | Kmiec                |
| 5,744,305 | 04/28/98 | Fodor et al.         |
| 5,741,668 | 04/21/98 | Ward et al.          |
| 5,731,181 | 03/24/98 | Kmiec                |
| 5,723,591 | 03/03/98 | Livak et al.         |
| 5,719,262 | 02/17/98 | Buchardt et al.      |
| 5,714,331 | 02/03/98 | Buchardt et al.      |
| 5,714,320 | 02/03/98 | Kool                 |
| 5,693,761 | 12/02/97 | Queen et al.         |
| 5,679,647 | 10/21/97 | Carson et al.        |
| 5,677,439 | 10/14/97 | Weis et al.          |
| 5,677,437 | 10/14/97 | Teng et al.          |
| 5,663,312 | 09/02/97 | Chaturvedula         |
| 5,661,016 | 08/26/97 | Lonberg et al.       |
| 5,633,425 | 05/27/97 | Lonberg et al.       |
| 5,633,360 | 05/27/97 | Bischofberger et al. |
| 5,631,153 | 05/20/97 | Capecchi et al.      |
| 5,627,059 | 05/06/97 | Capecchi et al.      |
| 5,627,052 | 05/06/97 | Schrader             |
| 5,625,126 | 04/29/97 | Lonberg et al.       |
| 5,625,050 | 04/29/97 | Beaton et al.        |
| 5,625,048 | 04/29/97 | Tsien et al.         |
| 5,623,070 | 04/22/97 | Cook et al.          |
| 5,618,704 | 04/08/97 | Sanghvi et al.       |
| 5,614,396 | 03/25/97 | Bradley et al.       |
| 5,610,289 | 03/11/97 | Cook et al.          |
| 5,608,046 | 03/04/97 | Cook et al.          |
| 5,602,240 | 02/11/97 | De Mesmaeker et al.  |
| 5,596,086 | 01/21/97 | Matteucci et al.     |
| 5,595,915 | 01/21/97 | Geysen               |
| 5,591,669 | 01/07/97 | Krimpenfort et al.   |
| 5,589,466 | 12/31/96 | Feigner et al.       |
| 5,587,361 | 12/24/96 | Cook et al.          |
| 5,571,799 | 11/05/96 | Tkachuk et al.       |
| 5,570,694 | 11/05/96 | Rometsch             |
| 5,569,825 | 10/29/96 | Lonberg et al.       |
| 5,563,253 | 10/08/96 | Agrawal et al.       |
| 5,561,225 | 10/01/96 | Maddry et al.        |
| 5,550,111 | 08/27/96 | Suhadolnik et al.    |
| 5,545,807 | 08/13/96 | Surani et al.        |
| 5,545,806 | 08/13/96 | Lonberg et al.       |

|           |          |                     |
|-----------|----------|---------------------|
| 5,541,307 | 07/30/96 | Cook et al.         |
| 5,541,306 | 07/30/96 | Agrawal et al.      |
| 5,539,084 | 07/23/96 | Geysen              |
| 5,539,082 | 07/23/96 | Nielsen et al.      |
| 5,538,848 | 07/23/96 | Livak et al.        |
| 5,536,821 | 07/16/96 | Agrawal et al.      |
| 5,527,695 | 06/18/96 | Hodges et al.       |
| 5,519,126 | 05/21/96 | Hecht               |
| 5,489,677 | 02/06/96 | Sanghvi et al.      |
| 5,487,992 | 01/30/96 | Capecchi et al.     |
| 5,476,925 | 12/19/95 | Letsinger et al.    |
| 5,470,967 | 11/28/95 | Huie et al.         |
| 5,466,677 | 11/14/95 | Baxter et al.       |
| 5,464,764 | 11/07/95 | Capecchi et al.     |
| 5,455,233 | 10/03/95 | Spielvogel et al.   |
| 5,453,496 | 09/26/95 | Caruthers et al.    |
| 5,445,934 | 08/29/95 | Fodor et al.        |
| 5,434,257 | 07/18/95 | Matteucci et al.    |
| 5,405,939 | 04/11/95 | Suhadolnik et al.   |
| 5,405,938 | 04/11/95 | Summerton et al.    |
| 5,399,676 | 03/21/95 | Froehler            |
| 5,321,131 | 06/14/94 | Agrawal et al.      |
| 5,286,717 | 02/15/94 | Cohen et al.        |
| 5,279,044 | 01/18/94 | Bremer              |
| 5,278,302 | 01/11/94 | Caruthers et al.    |
| 5,276,019 | 01/04/94 | Cohen et al.        |
| 5,272,071 | 12/21/93 | Chappel             |
| 5,264,564 | 11/23/93 | Matteucci           |
| 5,264,562 | 11/23/93 | Matteucci           |
| 5,264,423 | 11/23/93 | Cohen et al.        |
| 5,235,033 | 08/10/93 | Summerton et al.    |
| 5,216,141 | 06/01/93 | Benner              |
| 5,214,134 | 05/25/93 | Weis et al.         |
| 5,188,897 | 02/23/93 | Suhadolnik et al.   |
| 5,186,042 | 02/16/93 | Miyazaki            |
| 5,185,444 | 02/09/93 | Summerton et al.    |
| 5,177,196 | 01/05/93 | Meyer, Jr. et al.   |
| 5,166,315 | 11/24/92 | Summerton et al.    |
| 5,034,506 | 07/23/91 | Summerton et al.    |
| 5,023,243 | 06/11/91 | Tullis              |
| 4,708,871 | 11/24/87 | Geysen              |
| 4,476,301 | 10/09/84 | Imbach et al.       |
| 4,469,863 | 09/04/84 | Ts'o et al.         |
| 4,246,774 | 01/27/81 | Flesselles et al.   |
| 3,980,986 | 09/14/76 | Baird et al.        |
| 3,687,808 | 08/29/72 | Merigan, Jr. et al. |

### Foreign Patent Documents

|             |          |     |
|-------------|----------|-----|
| WO 01/05970 | 01/25/01 | PCT |
| WO 01/72962 | 10/04/01 | PCT |
| WO 00/15779 | 03/23/00 | PCT |
| WO 99/58720 | 11/18/99 | PCT |
| WO 98/59362 | 12/30/98 | PCT |
| WO 98/59361 | 12/30/98 | PCT |
| WO 98/59360 | 12/30/98 | PCT |
| WO 98/12559 | 03/26/98 | PCT |
| WO 97/43316 | 11/20/97 | PCT |
| WO 97/34631 | 09/25/97 | PCT |
| WO 97/19193 | 05/29/97 | PCT |
| WO 96/32478 | 10/17/96 | PCT |
| WO 96/18412 | 06/26/96 | PCT |

### Other Patent Documents

Ailor et al., "Overexpression of a Cystolic Chaperone in Insect Cells," *Biotechnology & Bioengineering*, Vol. 58 No. 2 & 3: pp. 196-203 (April 20/May 5, 1998).

Alers et al., "Universal Linkage System: An Improved Method for Labeling Archival DNA for Comparative Genomic Hybridization," *Genes, Chromosomes, and Cancer* vol. 25: pp. 301-305 (1999).

Allen et al., "Finding Prospective Partners in the Library: the Two-Hybrid System and Phage Display Find a Match," *Trends in Biochemical Science* vol. 20: pp. 511-516 (December 1995).

Anzar et al., "Rho Signals to Cell Growth and Apoptosis," *Cancer Letters* vol. 165: pp. 1-10 (2001).

Assoian et al., "Cell Anchorage and the Cytoskeleton as Partners in Growth Factor Dependent Cell Cycle Progression," *Current Opinion in Cell Biology* vol. 9: p. 93 (1997).

Aujame et al., "High Affinity Human Antibodies by Phage Display," *Human Antibodies* vol. 8 no. 4: pp. 155-168 (1997).

Babji et al., *Proc. Nat'l. Acad. Sci. USA*, 88:10676-10680, December 1991; Genbank Accession Number M77812

Baner et al., "More Keys to Padlock Probes: Mechanisms for High-Throughput Nucleic Acid Analysis," *Current Opinion in Biotechnology* vol. 12: pp. 11-15 (2001).

Barbas et al., "Selection of Human Anti-Viral Antibodies," *Trends in Biotechnology* vol. 14: pp. 230-234 (1996).

Becker et al., "High-Efficiency Transformation of Yeast by Electroporation," *Methods in Enzymology* vol. 194: pp. 182-187 (1991).

Bishop et al., "Rho GTPases and Their Effector Proteins," *Biochem. J.* vol. 348: pp. 241-255 (2000).

Braga et al., "The Small GTPases Rho and Rac Are Required for the Establishment of Cadherin-Dependent Cell-Cell Contacts," *Journal of Cell Biology* vol. 137: p. 1421 (1997).

Brenner et al., "In Vitro Cloning of complex Mixtures of DNA on Microbeads: Physical Separation of Differentially Expressed cDNAs," *Proc. Nat'l. Acad. Sci. USA* vol. 97 no. 4: pp. 16650-16670 (2000).

Burbelo et al., Genbank Accession Number AF268032, June 2, 2001; submitted May 16, 2000

Caron et al., "Identification of Two Distinct Mechanisms of Phagocytosis Controlled by Different Rho GTPases," *Science* vol. 282: pp. 1717-1721 (1998).

Chan et al., "Triplex DNA: Fundamentals, Advances, and Potential Applications for Gene Therapy," *J. Mol. Med.* vol. 75 no. 4: pp. 267-282 (1997).

Chen et al., "Herbicide Resistance from a Divide EPSPS Protein: The Split *Synechocystis* DnaE Intein as an In Vivo Affinity Domain," *Gene* vol. 263: pp. 39-48 (2001).

Chenchik et al., "Full-Length cDNA Cloning and Determination of mRNA 5' and 3' Ends by Amplification of Adaptor-Ligated cDNA," *BioTechniques* vol. 21: pp. 526-532 (1996).

Co et al., "Humanized Antibodies for Therapy," *Nature* vol. 351: pp. 501-502 (6 June 1991).



Cormack et al., "FACS-Optimized Mutants of the Green Fluorescent Protein (GFP)," *Gene* vol. 173: pp. 33-38 (1996).

Culver et al., "Correction of Chromosomal Point Mutations in Human Cells with Bifunctional Oligonucleotides," *Nature Biotechnology* vol. 17 no. 10: pp. 989-993 (1999).

Cunningham et al., "High Resolution Epitope Mapping of hGH-Receptor Interactions by Alanine-Scanning Mutagenesis," *Science* vol. 244 no. 4908: pp. 1081-1085 (2 June 1989).

de Kruif et al., "New Perspectives on Recombinant Human Antibodies," *Immunology Today* vol. 17 no. 10: pp. 453-455 (1996).

Delgado et al., "The Uses and Properties of PEG-Linked Proteins," *Critical Reviews in Therapeutic Drug Carrier Systems* vol. 9 nos. 3 & 4: pp. 249-304 (1992).

DeSantis et al., "Chemical Modification of Enzymes for Enhanced Functionality," *Current Opinion in Biotechnology* vol. 10: pp. 324-330 (1999).

DiCunto et al., "Citron Rho-Interacting Kinase, a Novel Tissue-Specific Ser/Thr Kinase Encompassing the Rho-Rac-Binding Protein Citron," *J. Biol. Chem.* vol. 273: pp. 29706-29711 (1998).

DeRisi et al., *Nature Genetics*, 14:457-459 (1996)

DOE Joint Genome Institute, Genbank Accession Number AC008521, April 2000

Drees, Becky L., "Progress and Variation in Two-Hybrid and Three-Hybrid Technologies," *Current Opinion in Chemical Biology* vol. 3: pp. 64-70 (1999).

Edelman et al., "Obtaining a Functional Recombinant Anti-Rhesus (D) Antibody Using the Baculovirus-Insect Cell Expression System," *Immunology* vol. 91: pp. 13-19 (1997).

Eldin et al., "High-Level Secretion of Two Antibody Single Chain Fv Fragments by *Pichia Pastoris*," *Journal of Immunological Methods* vol. 201: pp. 67-75 (1997).

Escude et al., "Padlock Oligonucleotides for Duplex DNA Base on Sequence-Specific Triple Helix Formation," *Proc. Nat'l. Acad. Sci. USA* vol. 96 no. 19: pp. 10603-10607 (1999).

Fashena et al., "The Continued Evolution of Two-Hybrid Screening Approaches in Yeast: How to Outwit Different Preys with Different Baits," *Gene* vol. 250: pp. 1-14 (2000).

Fields et al., "The Two-Hybrid System: an Assay for Protein-Protein Interactions," *Trends in Genetics* vol. 10 no. 8: pp. 286-292 (August 1994).

Finn et al., "Synthesis and Properties of DNA-PNA Chimeric Oligomers," *Nucleic Acids Research* vol. 24: pp. 3357-3363 (1996).

Fischer et al., "Molecular Farming of Recombinant Antibodies in Plants," *Biol. Chem.* vol. 380: pp. 825-839 (July/August 1999).

Fischer et al., "Towards Molecular Farming in the Future: *Pichia Pastoris*-Based Production of Single-Chain Antibody Fragments," *Biotechnol. Appl. Biochem.* vol. 30: pp. 117-120 (1999).

Fischer et al., "Antibody Production by Molecular Farming in Plants," *Journal of Biological Regulators and Homeostatic Agents* vol. 14 no. 2: pp. 83-92 (2000).

Fischer et al., "Towards Molecular Farming in the Future: Transient Protein Expression in Plants," *Biotechnol. Appl. Biochem.* vol. 30: pp. 113-116 (1999).

Flynn et al., "Multiple Interactions of PRK1 with RhoA", *J. of Biol. Chem.*, 273(5): 2698-2705 (1998)

Fox, "Targeting DNA with Triplexes," *Current Medicinal Chemistry* vol. 7 no. 1: pp. 17-37 (2000).

Frenken et al., "Recent Advances in the Large-Scale Production of Antibody Fragments Using Lower Eukaryotic

Microorganisms," *Res. Immunol.* vol. 149: pp. 589-599 (1998).

Freyre et al., "Very High Expression of an Anti-Carcinoembryonic Antigen Single Chain Fv Antibody Fragment in the Yeast *Pichia Pastoris*," *Journal of Biotechnology* vol. 76: pp. 157-163 (2000).

Fujisawa et al., "Different Regions of Rho Determine Rho-Selective Binding of Different Classes of Rho Target Molecules," *J. of Biol. Chem.*, vol. 273: pp. 18943-18949 (1998).

Fujita et al, "Ropporin, a Sperm-Specific Binding Protein of Rhophilin, That is Localized in the Fibrous Sheath of Sperm Flagella," *Journal of Cell Science* vol. 113: pp. 103-112 (2000).

Gamper et al., "The DNA Strand of Chimeric RNA/DNA Oligonucleotides Can Direct Gene Repair/Conversion Activity in Mammalian and Plant Cell-Free Extracts," *Nucleic Acids Research* vol. 28 no. 21: pp. 4332-4339 (2000).

Gautheret et al., "Alternate Polyadenylation in Human mRNAs: A Large-Scale Analysis by EST Clustering," *Genome Research* vol. 8: pp. 524-530 (1998).

Gavilondo et al., "Antibody Engineering at the Millennium," *Biotechniques* vol. 29: pp. 128-138 (2000).

Geysen et al., "Use of Peptide Synthesis to Probe Viral Antigens for Epitopes to a Resolution of a Single Amino Acid," *Proc. Nat'l. Acad. Sci. USA*, vol. 81: pp. 3998-4002 (1984).

Giddings et al., "Transgenic Plants as Factories for Biopharmaceuticals," *Nature Biotechnology* vol. 18: pp. 1151-1155 (2000).

Gonnet et al., "Exhaustive Matching of the Entire Protein Sequence Database," *Science* vol. 256 no. 5062: pp. 1443-1445 (1992).

Griffiths et al., "Strategies for Selection of Antibodies by Phage Display," *Current Opinion in Biotechnology* vol. 9: pp. 102-108 (1998).

Hall, A., "Rho GTPases and the Actin Cytoskeleton," *Science* vol. 279: pp. 509-514 (1998).

Heid et al., "Real Time Quantitative PCR," *Genome Research* vol. 6 no. 10: pp. 986-994 (1996).

Heikal et al., "Molecular Spectroscopy and Dynamics of Intrinsically Fluorescent Proteins: Coral red (dsRed) and Yellow (Citrine)," *Proc. Nat'l. Acad. Sci. USA*, vol. 97: pp. 11996-12001 (2000).

Heim et al., "Engineering Green Fluorescent Protein for Improved Brightness, Longer Wavelengths and Fluorescence Resonance Energy Transfer," *Current Biology* vol. 6: pp. 178-182 (1996).

Henegariu et al., "Custom Fluorescent-Nucleotide Synthesis as an Alternative Method for Nucleic Acid Labeling," *Nature Biotechnology* vol. 18: pp. 345-348 (2000).

Henikoff et al., "Amino Acid Substitution Matrices from Protein Blocks," *Proc. Nat'l. Acad. Sci. USA*, vol. 89: pp. 10915-10919 (November 1992).

Holland et al., "Detection of Specific Polymerase Chain reaction Product by Utilizing the 5'  $\rightarrow$  3' Exonuclease Activity of *Thermus Aquaticus* DNA Polymerase," *Proc. Nat'l. Acad. Sci. USA* vol. 88: pp. 7276-7280 (1991).

Hoogenboom et al., "Antibody Phage Display Technology and its Applications," *Immunotechnology*, vol. 4: pp. 1-20 (1998).

Hoogenboom, "Designing and Optimizing Library Selection Strategies for Generating High-Affinity Antibodies," *Trends in Biotechnology* vol. 15: pp. 62-70 (February 1997).

Hsu et al., "Coexpression of Molecular Chaperone BiP Improves Immunoglobulin Solubility and IgG Secretion from *Trichoplusia ni* Insect Cells," *Biotechnol. Prog.* vol. 13: pp. 96-104 (1997).

Hudson, "Recombinant Antibody Fragments," *Current Opinion in Biotechnology* vol. 9: pp. 395-402 (1998).

International Human Genome Sequencing Consortium,  
*Nature* vol. 409: pp. 860-921 (15 February 2001).

Jelsma et al., "Increased Labeling of DNA Probes For In Situ Hybridization with the Universal Linkage System (ULS)," *Journal of NIH Research* vol. 5: p. 82 (1994).

Jin et al., "High Resolution Functional Analysis of Antibody-Antigen Interactions," *J. Mol. Biol.* vol. 226: pp. 851-865 (1992).

Kochetkova et al., "Triplex-Forming Oligonucleotides and Their Use in the Analysis of Gene Transcription," *Methods in Molecular Biology* vol. 130: pp. 189-201 (2000).

Kole et al., "Protein-Tyrosine Phosphatase Inhibition by a Peptide Containing the Phosphotryosyl Mimetic, L-O-Malonyltyrosine," *Biochemical & Biophysical Research Communications* vol. 209 no. 3: pp. 817-821 (1995).

Kostrikis et al., "Spectral Genotyping of Human Alleles," *Science* vol. 279: pp. 1228-1229 (1998).

Kozma et al., "Rho Family GTPases and Neuronal Growth Cone Remodelling: Relationship Between Increased Complexity Induced by Cdc42Hs, Rac1, and Acetylcholine and Collapse Induced by RhoA and Lysophosphatidic Acid," *Molecular and Cellular Biology* vol. 17: p. 1201 (1997).

Kricka et al., "Comparison of 5-Hydroxy-2, 3-Dihydrophthalazine-1, 4-Dione and Luminol as Co-Substrates for Detection of Horseradish Peroxidase in Enhanced Chemiluminescent Reactions," *Journal of Immunoassay* vol. 17: pp. 67-83 (1996).

Kuimelis et al., "Structural Analogues of TaqMan Probes for Real-Time Quantitative PCR," *Nucleic Acids Symposium Series* no. 37: pp. 255-256 (1997).

Lander et al., "The Chipping Forecast," *Supplement to Nature Genetics* vol. 21 no. 1: pp. 1-60 (January 1999).

Larsen et al., "Antisense Properties of Peptide Nucleic Acid," *Biochimica et Biophysica Acta* 1489: pp. 159-166 (1999).

Lauffer et al., "MS-325: Albumin-Targeted Contrast Agent for MR Angiography," *Radiology* vol. 207 no. 2: pp. 529-538 (1998).

Lerner, "Tapping the Immunological Repertoire to Produce Antibodies of Predetermined Specificity," *Nature* vol. 299: pp. 592-596 (1982).

Li et al., "Deletions of the *Aequorea Victoria* Green Fluorescent Protein Define the Minimal Domain Required for Fluorescence," *J. of Biol. Chem.*, vol. 272: pp. 28545-28549 (1997).

Li et al., "Production of Functional Antibodies Generated in a Nonlytic Insect Cell Expression System," *Protein Expression and Purification* vol. 21: pp. 121-128 (2001).

Liu et al., "Progress Toward the Evolution of an Organism with an Expanded Genetic Code," *Proc. Nat'l. Acad. Sci. USA* vol. 96: pp. 4780-4785 (1999).

Lizardi et al., "Mutation Detection and Single-Molecule Counting Using Isothermal Rolling-Circle Amplification," *Nature Genetics* vol. 19: pp. 225-232 (1998).

Luban et al., "The Yeast Two-Hybrid System for Studying Protein-Protein Interactions," *Current Opinions in Biotechnology* vol. 6: pp. 59-64 (1995).

Lundqvist et al., "Influence of Different Luminols on the Characteristics of the Chemiluminescence Reaction in Human Neutrophils," *J. Biolumin. Chemilumin.* vol. 10: pp. 353-359 (1995).

Ma et al., "Plant Antibodies for Immunotherapy," *Plant Physiology* vol. 109: pp. 341-346 (1995).

Marinissen et al., "Regulation of Gene Expression by the Small GTPase Rho Through the ERK6 (p38 $\lambda$ ) MAP Kinase Pathway," *Genes & Development* vol. 15: pp. 535-553 (2001).

Marras et al., "Multiplex Detection of Single-Nucleotide Variations Using Molecular Beacons," *Genetic*

*Analysis: Biomolecular Engineering* vol. 14: pp. 151-156 (1999).

Mendelsohn et al., "Applications of Interaction Traps/Two-Hybrid Systems to Biotechnology Research," *Current Opinion in Biotechnology* vol. 5: pp. 482-486 (1994).

Merchant et al., "Recent Advancements in Surface-Enhanced Laser Desorption/Ionization-Time of Flight-Mass Spectrometry," *Electrophoresis* vol. 21: pp. 1164-1177 (2000).

Merk et al., "Cell-Free Expression of Two Single-Chain Monoclonal Antibodies Against Lysozyme: Effect of Domain Arrangement on the Expression," *J. Biochem.* vol. 125 no. 2: pp. 328-33 (1999).

Misra et al., "Polyamide Nucleic Acid-DNA Chimera Lacking the Phosphate Backbone Are Novel Primers for Polymerase Reaction Catalyzed by DNA Polymerases," *Biochemistry* vol. 37: pp. 1917-1925 (1998).

Miyawaki et al., "Fluorescent Indicators for  $Ca^{2+}$  Based on Green Fluorescent Proteins and Calmodulin," *Nature* vol. 388: pp. 882-887 (1997).

Morrison et al., "Chimeric Human Antibody Molecules: Mouse Antigen-Binding Domains with Human constant Region Domains," *Proc. Nat'l. Acad. Sci. USA*, vol. 81: pp. 6851-6855 (1984).

Nesbit et al., "Production of a Functional Monoclonal Antibody Recognizing Human Colorectal Carcinoma Cells from a Baculovirus Expression System," *Journal of Immunological Methods* vol. 151: pp. 201-208 (1992).

Nielsen, "Peptide Nucleic Acids as Therapeutic Agents," *Current Opinion in Structural Biology* vol. 9: pp. 353-357 (1999).

Nielsen, "Applications of Peptide Nucleic Acids," *Current Opinion in Biotechnology* vol. 10: pp. 71-75 (1999).

Nielsen et al., "Peptide Nucleic Acids: On the Road to New Gene Therapeutic Drugs," *Pharmacology & Toxicology* vol. 86: pp. 3-7 (2000).

Nilsson et al., "Padlock Probes: Circularizing Oligonucleotides for Localized DNA Detection," *Science* vol. 265 no. 5181: pp. 2085-2088 (1994).

Ormö et al., "Crystal Structure of the Aequorea Victoria Green Fluorescent Protein," *Science* vol. 273: pp. 1392-1395 (1996).

Palm et al., "Spectral Variants of Green Fluorescent Protein," *Methods in Enzymology* vol. 302: pp. 378-394 (1999).

Penn et al., "Mining the Human Genome Using Microarrays of Open Reading Frames," *Nature Genetics* vol. 26: pp. 315-318 (2000).

Pennell et al., "In Vitro Production of Recombinant Antibody Fragments in *Picis Pastoris*," *Research in Immunology* vol. 149 no. 6: pp. 599-603 (1998).

Pollock et al., "Transgenic Milk as a Method for the Production of Recombinant Antibodies," *Journal of Immunological Methods* vol. 231: pp. 147-157 (1999).

Posnett et al., "A Novel Method for Producing Anti-Peptide Antibodies," *J. of Biol. Chem.*, vol. 263: pp. 1719-1725 (1988).

Praseuth et al., "Triple Helix Formation and the Antigene Strategy for Sequence-Specific Control of Gene Expression," *Biochimica et Biophysical Acta* 1489: pp. 181-206 (1999).

Prokopenko et al., "Untying the Gordian Knot of Cytokinesis: Role of Small G Proteins and Their Regulators," *Journal of Cell Biology* vol. 148: pp. 843-848 (2000).

Rader et al., "Phase Display of Combinatorial Antibody Libraries," *Current Opinion in Biotechnology* vol. 8: pp. 503-508 (1997).



Ray et al., "Peptide Nucleic Acid (PNA): Its Medical and Biotechnical Applications and Promise for the Future," *FASEB Journal* vol. 14 no. 9: pp. 1041-1060 (2000).

Reid et al., "Rhotekin, a New Putative Target for Rho Bearing Homology to a Serine/Threonine Kinase, PKN, and Rhophilin in the Rho-Binding Domain," *J. of Biol. Chem.*, vol. 271: pp. 13558-13560 (1996).

Ridley, A.J., "The GTP Binding Protein Rho," *Int. J. Biochem. Cell Biol.* vol. 29: pp. 1225-1229 (1997).

Riechmann et al., "Reshaping Human Antibodies for Therapy," *Nature* vol. 332: pp. 323-327 (24 March 1988).

Russell, D.A., "Feasibility of Antibody Production in Plants for Human Therapeutic Use," *Current Topics in Microbiology & Immunology* vol. 240: pp. 119-38 (1999).

Ryabova et al., "Functional Antibody Production Using Cell-Free Translation: Effects of Protein Disulfide Isomerase and Chaperones," *Nature Biotechnology* vol. 15: pp. 79-84 (1997).

Sambrook et al., "Expression of Cloned Genes in *E. coli*", *Molecular Cloning*, (1992)

Schiestl et al., "High Efficiency Transformation of Intact Yeast Cells Using Single Stranded Nucleic Acids as a Carrier," *Current Genetics* vol. 16 nos.5 & 6: pp. 339-346 (1989).

Schmitz et al., "Rho GTPases: Signaling, Migration, and Invasion," *Experimental Cell Research*, vol. 261: pp. 1-12 (2000).

Schoner et al., "Translation of a Synthetic Two-Cistron mRNA in *Escherichia coli*," *Proc. Nat'l. Acad. Sci. USA* vol. 83: pp. 8506-8510 (1986).

Schweitzer et al., "Combining Nucleic Acid Amplification and Detection," *Current Opinion in Biotechnology* vol. 12 no. 1: pp. 21-27 (2001).

Scott et al., "Cellular Camouflage: Fooling the Immune System with Polymers," *Current Pharmaceutical Design* vol. 4: pp. 423-438 (1998).

Sharon et al., "Expression of a VHCK Chimaeric Protein in Mouse Myeloma Cells," *Nature* vol. 309: pp. 364-367 (1984).

Shinnick et al., "Synthetic Peptide Immunogens as Vaccines," *Annual Review of Microbiology* vol. 37: pp. 425-446 (1983).

Shusta et al., "Increasing the Secretory Capacity of *Saccharomyces Cerevisiae* for Production of Single-Chain Antibody Fragments," *Nature Biotechnology* vol. 16: pp. 773-777 (August 1998).

Sidhu, Sachdev S., "Phage Display in Pharmaceutical Biotechnology," *Current Opinion in Biotechnology* vol. 11: pp. 610-616 (2000).

Sonstegard et al., Genbank Accession Number BE478809, August 2000

Sokol et al., "Real Time Detection of DNA-RNA Hybridization in Living Cells," *Proc. Nat'l. Acad. Sci. USA* vol. 95: pp. 11538-11543 (1998).

Sutcliffe et al., "Antibodies that React with Predetermined Sites on Proteins," *Science* vol. 219: pp. 660-666 (1983).

Takahashi et al., "Production of Humanized Fab Fragment Against Human High Affinity IgE Receptor in *Pichia Pastoris*," *Biosci. Biotechnol. Biochem.* vol. 64 no. 10: pp. 2138-2144 (2000).

Takai Y. et al., "Small GTP Binding Proteins," *Physiological Review* vol. 18: pp. 153-208 (2001).

Takeda et al., "Construction of Chimaeric Processed Immunoglobulin Genes Containing Mouse Variable and Human constant Region Sequences," *Nature* vol. 314: pp. 452-454 (April 1985).

- Tam et al., "Synthetic Peptide Vaccine Design: Synthesis and Properties of a High-Density Multiple Antigenic Peptide System," *Proc. Nat'l. Acad. Sci. USA* vol. 85: pp. 5409-5413 (1988).
- Tatiana et al., "Blast 2 Sequences - A New Tool for Comparing Protein and Nucleotide Sequences," *FEMS Microbiology Letters* vol. 174: pp. 247-250 (1999).
- Thorpe et al., "Bioluminescence and Chemiluminescence," *Methods in Enzymology* vol. 133: pp. 331-353 (1986).
- Topcu et al., "The Yeast Two-Hybrid System and Its Pharmaceutical Significance," *Pharmaceutical Research* vol. 17 no. 9: pp. 1049-1055 (2000).
- Tyagi et al., "Molecular Beacons: Probes that Fluoresce upon Hybridization," *Nature Biotechnology* vol. 14: pp. 303-308 (1996).
- Tyagi et al., "Multicolor Molecular Beacons for Allele Discrimination," *Nature Biotechnology* vol. 16: pp. 49-53 (1998).
- Van Belkum et al., "Non-Isotopic Labeling of DNA by Newly Developed Hapten-Containing Platinum Compounds," *BioTechniques* vol. 16: pp. 148-153 (1994).
- Verma et al., "Antibody Engineering: Comparison of Bacterial, Yeast, Insect and Mammalian Expression Systems," *Journal of Immunological Methods* vol. 216: pp. 165-81 (1998).
- Watanbe et al., "Protein Kinase N (PKN) and PKN-Related Protein Rhophilin as Targets of Small GTPase Rho," *Science* vol. 271: pp. 645-648 (1996).
- Weiss et al., "Rapid Mapping of Protein Functional Epitopes by Combinatorial Alanine Scanning," *Proc. Nat'l. Acad. Sci. USA*, vol. 97: pp. 8950-8954 (2000).
- Winter et al., "Making Antibodies by Phage Display Technology," *Annual Review of Immunology*: pp. 433-455 (1994).
- Wu et al., Genbank Accession Number AC025267, October 2000; submitted March 2000

A printout of the web page describing the "EZ-Detect Rho Activation Kit" from Pierce Biotechnology

A printout of the web page describing "Rhotekin-RBD Protein GST Beads" from Cytoskeleton, Inc.

A printout of the web page describing "Rhotekin Rho Binding Domain, agarose" from Upstate Cell Signaling Solutions

In accordance with 37 C.F.R. § 1.98 (d), copies of these documents, all of which were made of record in U.S. Patent Application No. 09/895,040, from which priority is claimed under 35 U.S.C. § 120, are not submitted herewith.

It is respectfully requested that these documents be (1) fully considered by the Patent and Trademark Office during the examination of this application; and (2) printed on any patent that may issue on this application. Applicants request that a copy of Form PTO-1449 (submitted in duplicate herewith), as considered and initialed by the Examiner, be returned with the next communication.

An early and favorable action is respectfully requested.

Respectfully submitted,

November 17, 2003



David A. Roise  
Reg. No. 47,904  
Attorney for Applicants

FISH & NEAVE  
Customer No. 1473  
1251 Avenue of the Americas  
New York, N. Y. 10020  
(650) 617-4000

I hereby Certify that this  
Correspondence is being  
Deposited with the U.S.  
Postal Service as First  
Class Mail in an Envelope  
Addressed to : COM.  
COMMISSIONER FOR PATENTS,  
P.O. BOX 1450, Alexandria,  
VA 22313-1450 on:

11-17-03  
Date of Deposit

Lorraine Cole  
Name of Person Signing

Signature of Person Signing

11-17-03  
Date of Signature

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANTAPPLICANT  
**Shannon et al.**FILING DATE  
**September 15, 2003**

GROUP

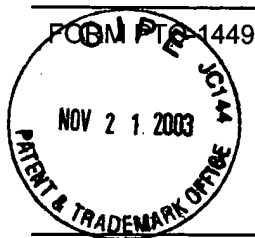
## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE     | NAME                | CLASS | SUBCLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|--------------------|----------|---------------------|-------|----------|----------------------------------|
|                     | 6,204,250          | 03/20/01 | Bot et al.          |       |          |                                  |
|                     | 6,204,061          | 03/20/01 | Capecchi et al.     |       |          |                                  |
|                     | 6,187,305          | 02/13/01 | Treco et al.        |       |          |                                  |
|                     | 6,180,377          | 01/30/01 | Morgan et al.       |       |          |                                  |
|                     | 6,180,370          | 01/30/01 | Queen et al.        |       |          |                                  |
|                     | 6,162,963          | 12/19/00 | Kucherlapati et al. |       |          |                                  |
|                     | 6,150,584          | 11/21/00 | Kucherlapati et al. |       |          |                                  |
|                     | 6,124,128          | 09/26/00 | Tsien et al.        |       |          |                                  |
|                     | 6,114,598          | 09/05/00 | Kucherlapati et al. |       |          |                                  |
|                     | 6,110,898          | 08/29/00 | Malone et al.       |       |          |                                  |
|                     | 6,096,865          | 08/01/00 | Michaels            |       |          |                                  |
|                     | 6,090,919          | 07/18/00 | Cormack et al.      |       |          |                                  |
|                     | 6,075,181          | 07/13/00 | Kucherlapati et al. |       |          |                                  |
|                     | 6,066,476          | 05/23/00 | Tsien et al.        |       |          |                                  |
|                     | 6,054,321          | 04/25/00 | Tsien et al.        |       |          |                                  |
|                     | 6,054,297          | 04/25/00 | Carter et al.       |       |          |                                  |
|                     | 6,051,831          | 04/18/00 | Koster              |       |          |                                  |
|                     | 6,048,524          | 04/11/00 | Selden et al.       |       |          |                                  |
|                     | 6,046,800          | 04/04/00 | Ohtomo et al.       |       |          |                                  |
|                     | 6,042,549          | 03/28/00 | Amano et al.        |       |          |                                  |
|                     | 6,027,881          | 02/22/00 | Pavlakakis et al.   |       |          |                                  |
|                     | 6,025,201          | 02/15/00 | Zelmanovic et al.   |       |          |                                  |
|                     | 6,017,897          | 01/25/00 | Li et al.           |       |          |                                  |
|                     | 6,016,191          | 01/18/00 | Ramos et al.        |       |          |                                  |
|                     | 6,013,256          | 01/11/00 | Light et al.        |       |          |                                  |
|                     | 6,004,752          | 12/21/99 | Loewy et al.        |       |          |                                  |
|                     | 6,004,744          | 12/21/99 | Goelet et al.       |       |          |                                  |
|                     | 6,001,233          | 12/14/99 | Levy                |       |          |                                  |
|                     | 5,990,689          | 11/23/99 | Poncon              |       |          |                                  |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.



U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

ATTY. DOCKET NO.  
**AEOMICA-11 CON**

SERIAL NO.  
**10/663,470**

APPLICANT  
**Shannon et al.**

FILING DATE  
**September 15, 2003**

GROUP

### U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE     | NAME                | CLASS | SUBCLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|--------------------|----------|---------------------|-------|----------|----------------------------------|
|                     | 5,985,847          | 11/16/99 | Carson et al.       |       |          |                                  |
|                     | 5,984,175          | 11/16/99 | Popp                |       |          |                                  |
|                     | 5,981,214          | 11/09/99 | Skoultchi           |       |          |                                  |
|                     | 5,968,750          | 10/19/99 | Zolotukhin et al.   |       |          |                                  |
|                     | 5,958,891          | 09/28/99 | Hsu et al.          |       |          |                                  |
|                     | 5,945,339          | 08/31/99 | Holloman et al.     |       |          |                                  |
|                     | 5,939,598          | 08/17/99 | Kucherlapati et al. |       |          |                                  |
|                     | 5,930,143          | 07/27/99 | Savazzi             |       |          |                                  |
|                     | 5,925,517          | 07/20/99 | Tyagi et al.        |       |          |                                  |
|                     | 5,889,351          | 03/30/99 | Okumura et al.      |       |          |                                  |
|                     | 5,888,983          | 03/30/99 | Kmiec et al.        |       |          |                                  |
|                     | 5,880,104          | 03/09/99 | Li et al.           |       |          |                                  |
|                     | 5,877,397          | 03/02/99 | Lonberg et al.      |       |          |                                  |
|                     | 5,874,304          | 02/23/99 | Zolotukhin et al.   |       |          |                                  |
|                     | 5,874,299          | 02/23/99 | Lonberg et al.      |       |          |                                  |
|                     | 5,871,984          | 02/16/99 | Kmiec               |       |          |                                  |
|                     | 5,869,619          | 02/09/99 | Studnicka           |       |          |                                  |
|                     | 5,854,033          | 12/29/98 | Lizardi             |       |          |                                  |
|                     | 5,846,726          | 12/08/98 | Nadeau et al.       |       |          |                                  |
|                     | 5,843,913          | 12/01/98 | Li et al.           |       |          |                                  |
|                     | 5,830,877          | 11/03/98 | Carson et al.       |       |          |                                  |
|                     | 5,824,269          | 10/20/98 | Kosaka et al.       |       |          |                                  |
|                     | 5,821,337          | 10/13/98 | Carter et al.       |       |          |                                  |
|                     | 5,821,123          | 10/13/98 | Studnicka           |       |          |                                  |
|                     | 5,814,318          | 09/29/98 | Lonberg et al.      |       |          |                                  |
|                     | 5,807,715          | 09/15/98 | Morrison et al.     |       |          |                                  |
|                     | 5,804,566          | 09/08/98 | Carson et al.       |       |          |                                  |
|                     | 5,804,387          | 09/08/98 | Cormack et al.      |       |          |                                  |
|                     | 5,795,972          | 08/18/98 | Kmiec               |       |          |                                  |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANTAPPLICANT  
**Shannon et al.**FILING DATE  
**September 15, 2003**

GROUP

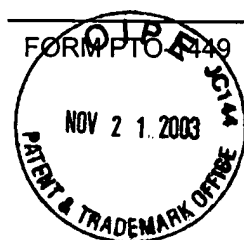
## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE     | NAME                 | CLASS | SUBCLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|--------------------|----------|----------------------|-------|----------|----------------------------------|
|                     | 5,789,650          | 08/04/98 | Lonberg et al.       |       |          |                                  |
|                     | 5,783,674          | 07/21/98 | Geysen               |       |          |                                  |
|                     | 5,780,296          | 07/14/98 | Holloman et al.      |       |          |                                  |
|                     | 5,777,079          | 07/07/98 | Tsien et al.         |       |          |                                  |
|                     | 5,770,429          | 07/23/98 | Lonberg et al.       |       |          |                                  |
|                     | 5,770,196          | 06/23/98 | Studnicka            |       |          |                                  |
|                     | 5,766,886          | 06/16/98 | Studnicka et al.     |       |          |                                  |
|                     | 5,760,012          | 06/02/98 | Kmiec                |       |          |                                  |
|                     | 5,756,325          | 05/26/98 | Kmiec                |       |          |                                  |
|                     | 5,744,305          | 04/28/98 | Fodor et al.         |       |          |                                  |
|                     | 5,741,668          | 04/21/98 | Ward et al.          |       |          |                                  |
|                     | 5,731,181          | 03/24/98 | Kmiec                |       |          |                                  |
|                     | 5,723,591          | 03/03/98 | Livak et al.         |       |          |                                  |
|                     | 5,719,262          | 02/17/98 | Buchardt et al.      |       |          |                                  |
|                     | 5,714,331          | 02/03/98 | Buchardt et al.      |       |          |                                  |
|                     | 5,714,320          | 02/03/98 | Kool                 |       |          |                                  |
|                     | 5,693,761          | 12/02/97 | Queen et al.         |       |          |                                  |
|                     | 5,679,647          | 10/21/97 | Carson et al.        |       |          |                                  |
|                     | 5,677,439          | 10/14/97 | Weis et al.          |       |          |                                  |
|                     | 5,677,437          | 10/14/97 | Teng et al.          |       |          |                                  |
|                     | 5,663,312          | 09/02/97 | Chaturvedula         |       |          |                                  |
|                     | 5,661,016          | 08/26/97 | Lonberg et al.       |       |          |                                  |
|                     | 5,633,425          | 05/27/97 | Lonberg et al.       |       |          |                                  |
|                     | 5,633,360          | 05/27/97 | Bischofberger et al. |       |          |                                  |
|                     | 5,631,153          | 05/20/97 | Capecchi et al.      |       |          |                                  |
|                     | 5,627,059          | 05/06/97 | Capecchi et al.      |       |          |                                  |
|                     | 5,627,052          | 05/06/97 | Schrader             |       |          |                                  |
|                     | 5,625,126          | 04/29/97 | Lonberg et al.       |       |          |                                  |
|                     | 5,625,050          | 04/29/97 | Beaton et al.        |       |          |                                  |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.



U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

ATTY. DOCKET NO.  
**AEOMICA-11 CON**

SERIAL NO.  
**10/663,470**

APPLICANT  
**Shannon et al.**

FILING DATE  
**September 15, 2003**

GROUP

U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE     | NAME                | CLASS | SUBCLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|--------------------|----------|---------------------|-------|----------|----------------------------------|
|                     | 5,625,048          | 04/29/97 | Tsien et al.        |       |          |                                  |
|                     | 5,623,070          | 04/22/97 | Cook et al.         |       |          |                                  |
|                     | 5,618,704          | 04/08/97 | Sanghvi et al.      |       |          |                                  |
|                     | 5,614,396          | 03/25/97 | Bradley et al.      |       |          |                                  |
|                     | 5,610,289          | 03/11/97 | Cook et al.         |       |          |                                  |
|                     | 5,608,046          | 03/04/97 | Cook et al.         |       |          |                                  |
|                     | 5,602,240          | 02/11/97 | De Mesmaeker et al. |       |          |                                  |
|                     | 5,596,086          | 01/21/97 | Matteucci et al.    |       |          |                                  |
|                     | 5,595,915          | 01/21/97 | Geysen              |       |          |                                  |
|                     | 5,591,669          | 01/07/97 | Krimpenfort et al.  |       |          |                                  |
|                     | 5,589,466          | 12/31/96 | Feigner et al.      |       |          |                                  |
|                     | 5,587,361          | 12/24/96 | Cook et al.         |       |          |                                  |
|                     | 5,571,799          | 11/05/96 | Tkachuk et al.      |       |          |                                  |
|                     | 5,570,694          | 11/05/96 | Rometsch            |       |          |                                  |
|                     | 5,569,825          | 10/29/96 | Lonberg et al.      |       |          |                                  |
|                     | 5,563,253          | 10/08/96 | Agrawal et al.      |       |          |                                  |
|                     | 5,561,225          | 10/01/96 | Maddry et al.       |       |          |                                  |
|                     | 5,550,111          | 08/27/96 | Suhadolnik et al.   |       |          |                                  |
|                     | 5,545,807          | 08/13/96 | Surani et al.       |       |          |                                  |
|                     | 5,545,806          | 08/13/96 | Lonberg et al.      |       |          |                                  |
|                     | 5,541,307          | 07/30/96 | Cook et al.         |       |          |                                  |
|                     | 5,541,306          | 07/30/96 | Agrawal et al.      |       |          |                                  |
|                     | 5,539,084          | 07/23/96 | Geysen              |       |          |                                  |
|                     | 5,539,082          | 07/23/96 | Nielsen et al.      |       |          |                                  |
|                     | 5,538,848          | 07/23/96 | Livak et al.        |       |          |                                  |
|                     | 5,536,821          | 07/16/96 | Agrawal et al.      |       |          |                                  |
|                     | 5,527,695          | 06/18/96 | Hodges et al.       |       |          |                                  |
|                     | 5,519,126          | 05/21/96 | Hecht               |       |          |                                  |
|                     | 5,489,677          | 02/06/96 | Sanghvi et al.      |       |          |                                  |

EXAMINER

DATE CONSIDERED

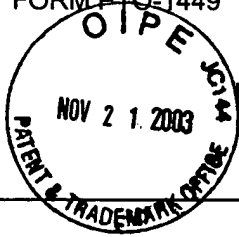
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**APPLICANT  
**Shannon et al.**FILING DATE  
**September 15, 2003**

GROUP

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE     | NAME              | CLASS | SUBCLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|--------------------|----------|-------------------|-------|----------|----------------------------------|
|                     | 5,487,992          | 01/30/96 | Capecchi et al.   |       |          |                                  |
|                     | 5,476,925          | 12/19/95 | Letsinger et al.  |       |          |                                  |
|                     | 5,470,967          | 11/28/95 | Huie et al.       |       |          |                                  |
|                     | 5,466,677          | 11/14/95 | Baxter et al.     |       |          |                                  |
|                     | 5,464,764          | 11/07/95 | Capecchi et al.   |       |          |                                  |
|                     | 5,455,233          | 10/03/95 | Spielvogel et al. |       |          |                                  |
|                     | 5,453,496          | 09/26/95 | Caruthers et al.  |       |          |                                  |
|                     | 5,445,934          | 08/29/95 | Fodor et al.      |       |          |                                  |
|                     | 5,434,257          | 07/18/95 | Matteucci et al.  |       |          |                                  |
|                     | 5,405,939          | 04/11/95 | Suhadolnik et al. |       |          |                                  |
|                     | 5,405,938          | 04/11/95 | Summerton et al.  |       |          |                                  |
|                     | 5,399,676          | 03/21/95 | Froehler          |       |          |                                  |
|                     | 5,321,131          | 06/14/94 | Agrawal et al.    |       |          |                                  |
|                     | 5,286,717          | 02/15/94 | Cohen et al.      |       |          |                                  |
|                     | 5,279,044          | 01/18/94 | Bremer            |       |          |                                  |
|                     | 5,278,302          | 01/11/94 | Caruthers et al.  |       |          |                                  |
|                     | 5,276,019          | 01/04/94 | Cohen et al.      |       |          |                                  |
|                     | 5,272,071          | 12/21/93 | Chappel           |       |          |                                  |
|                     | 5,264,564          | 11/23/93 | Matteucci         |       |          |                                  |
|                     | 5,264,562          | 11/23/93 | Matteucci         |       |          |                                  |
|                     | 5,264,423          | 11/23/93 | Cohen et al.      |       |          |                                  |
|                     | 5,235,033          | 08/10/93 | Summerton et al.  |       |          |                                  |
|                     | 5,216,141          | 06/01/93 | Benner            |       |          |                                  |
|                     | 5,214,134          | 05/25/93 | Weis et al.       |       |          |                                  |
|                     | 5,188,897          | 02/23/93 | Suhadolnik et al. |       |          |                                  |
|                     | 5,186,042          | 02/16/93 | Miyazaki          |       |          |                                  |
|                     | 5,185,444          | 02/09/93 | Summerton et al.  |       |          |                                  |
|                     | 5,177,196          | 01/05/93 | Meyer, Jr. et al. |       |          |                                  |
|                     | 5,166,315          | 11/24/92 | Summerton et al.  |       |          |                                  |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANTAPPLICANT  
**Shann n et al.**FILING DATE  
**September 15, 2003**

GROUP



## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE     | NAME                | CLASS | SUBCLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|--------------------|----------|---------------------|-------|----------|----------------------------------|
|                     | 5,034,506          | 07/23/91 | Summerton et al.    |       |          |                                  |
|                     | 5,023,243          | 06/11/91 | Tullis              |       |          |                                  |
|                     | 4,708,871          | 11/24/87 | Geysen              |       |          |                                  |
|                     | 4,476,301          | 10/09/84 | Imbach et al.       |       |          |                                  |
|                     | 4,469,863          | 09/04/84 | Ts'o et al.         |       |          |                                  |
|                     | 4,246,774          | 01/27/81 | Flesselles et al.   |       |          |                                  |
|                     | 3,980,986          | 09/14/76 | Baird et al.        |       |          |                                  |
|                     | 3,687,808          | 08/29/72 | Merigan, Jr. et al. |       |          |                                  |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE     | COUNTRY | CLASS | SUBCLASS | TRANSLATION |    |
|---------------------|--------------------|----------|---------|-------|----------|-------------|----|
|                     |                    |          |         |       |          | YES         | NO |
|                     | WO 01/05970        | 01/25/01 | PCT     |       |          |             |    |
|                     | WO 01/72962        | 10/04/01 | PCT     |       |          |             |    |
|                     | WO 00/15779        | 03/23/00 | PCT     |       |          |             |    |
|                     | WO 99/58720        | 11/18/99 | PCT     |       |          |             |    |
|                     | WO 98/59362        | 12/30/98 | PCT     |       |          |             |    |
|                     | WO 98/59361        | 12/30/98 | PCT     |       |          |             |    |
|                     | WO 98/59360        | 12/30/98 | PCT     |       |          |             |    |
|                     | WO 98/12559        | 03/26/98 | PCT     |       |          |             |    |
|                     | WO 97/43316        | 11/20/97 | PCT     |       |          |             |    |
|                     | WO 97/34631        | 09/25/97 | PCT     |       |          |             |    |
|                     | WO 97/19193        | 05/29/97 | PCT     |       |          |             |    |
|                     | WO 96/32478        | 10/17/96 | PCT     |       |          |             |    |
|                     | WO 96/18412        | 06/26/96 | PCT     |       |          |             |    |

EXAMINER

DATE CONSIDERED

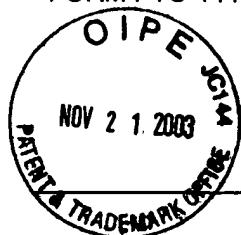
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

**AEOMICA-11 CON****10/663,470**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

APPLICANT

**Shannon t al.**

FILING DATE

**September 15, 2003**

GROUP

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |   |
|---------------------|---|
|                     | Ailor <i>et al.</i> , "Overexpression of a Cystolic Chaperone in Insect Cells," <i>Biotechnology &amp; Bioengineering</i> , Vol. 58 No. 2 & 3: pp. 196-203 (April 20/May 5, 1998).                                    |
|                     | Alers <i>et al.</i> , "Universal Linkage System: An Improved Method for Labeling Archival DNA for Comparative Genomic Hybridization," <i>Genes, Chromosomes, and Cancer</i> vol. 25: pp. 301-305 (1999).              |
|                     | Allen <i>et al.</i> , "Finding Prospective Partners in the Library: the Two-Hybrid System and Phage Display Find a Match," <i>Trends in Biochemical Science</i> vol. 20: pp. 511-516 (December 1995).                 |
|                     | Anzar <i>et al.</i> , "Rho Signals to Cell Growth and Apoptosis," <i>Cancer Letters</i> vol. 165: pp. 1-10 (2001).  |
|                     | Assoian <i>et al.</i> , "Cell Anchorage and the Cytoskeleton as Partners in Growth Factor Dependent Cell Cycle Progression," <i>Current Opinion in Cell Biology</i> vol. 9: p. 93 (1997).                             |
|                     | Aujame <i>et al.</i> , "High Affinity Human Antibodies by Phage Display," <i>Human Antibodies</i> vol. 8 no. 4: pp. 155-168 (1997).   |
|                     | Babji <i>et al.</i> , <i>Proc. Nat'l. Acad. Sci. USA</i> , 88:10676-10680, December 1991; Genbank Accession Number M77812   |
|                     | Baner <i>et al.</i> , "More Keys to Padlock Probes: Mechanisms for High-Throughput Nucleic Acid Analysis," <i>Current Opinion in Biotechnology</i> vol. 12: pp. 11-15 (2001).   |
|                     | Barbas <i>et al.</i> , "Selection of Human Anti-Viral Antibodies," <i>Trends in Biotechnology</i> vol. 14: pp. 230-234 (1996).  |
|                     | Becker <i>et al.</i> , "High-Efficiency Transformation of Yeast by Electroporation," <i>Methods in Enzymology</i> vol. 194: pp. 182-187 (1991).   |
|                     | Bishop <i>et al.</i> , "Rho GTPases and Their Effector Proteins," <i>Biochem. J.</i> vol. 348: pp. 241-255 (2000).  |
|                     | Braga <i>et al.</i> , "The Small GTPases Rho and Rac Are Required for the Establishment of Cadherin-Dependent Cell-Cell Contacts," <i>Journal of Cell Biology</i> vol. 137: p. 1421 (1997).                           |
|                     | Brenner <i>et al.</i> , "In Vitro Cloning of complex Mixtures of DNA on Microbeads: Physical Separation of Differentially Expressed cDNAs," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 97 no. 4: pp. 16650-16670 (2000). |
|                     | Burbelo <i>et al.</i> , Genbank Accession Number AF268032, June 2, 2001; submitted May 16, 2000   |
|                     | Caron <i>et al.</i> , "Identification of Two Distinct Mechanisms of Phagocytosis Controlled by Different Rho GTPases," <i>Science</i> vol. 282: pp. 1717-1721 (1998).   |
|                     | Chan <i>et al.</i> , "Triplex DNA: Fundamentals, Advances, and Potential Applications for Gene Therapy," <i>J. Mol. Med.</i> vol. 75 no. 4: pp. 267-282 (1997).   |
|                     | Chen <i>et al.</i> , "Herbicide Resistance from a Divide EPSPS Protein: The Split <i>Synechocystis</i> DnaE Intein as an In Vivo Affinity Domain," <i>Gene</i> vol. 263: pp. 39-48 (2001).                            |
|                     | Chenchik <i>et al.</i> , "Full-Length cDNA Cloning and Determination of mRNA 5' and 3' Ends by Amplification of Adaptor-Ligated cDNA," <i>BioTechniques</i> vol. 21: pp. 526-532 (1996).                              |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

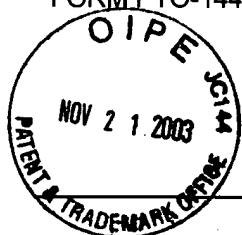
U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

AEOMICA-11 CON

SERIAL NO.

10/663,470

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

APPLICANT

Shannon et al.

FILING DATE

September 15, 2003

GROUP

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |  |
|---------------------|--|
|                     | Co et al., "Humanized Antibodies for Therapy," <i>Nature</i> vol. 351: pp. 501-502 (6 June 1991).  |
|                     | Cormack et al., "FACS-Optimized Mutants of the Green Fluorescent Protein (GFP)," <i>Gene</i> vol. 173: pp. 33-38 (1996).   |
|                     | Culver et al., "Correction of Chromosomal Point Mutations in Human Cells with Bifunctional Oligonucleotides," <i>Nature Biotechnology</i> vol. 17 no. 10: pp. 989-993 (1999).                    |
|                     | Cunningham et al., "High Resolution Epitope Mapping of hGH-Receptor Interactions by Alanine-Scanning Mutagenesis," <i>Science</i> vol. 244 no. 4908: pp. 1081-1085 (2 June 1989).                |
|                     | de Kruif et al., "New Perspectives on Recombinant Human Antibodies," <i>Immunology Today</i> vol. 17 no. 10: pp. 453-455 (1996).   |
|                     | Delgado et al., "The Uses and Properties of PEG-Linked Proteins," <i>Critical Reviews in Therapeutic Drug Carrier Systems</i> vol. 9 nos. 3 & 4: pp. 249-304 (1992).                             |
|                     | DeSantis et al., "Chemical Modification of Enzymes for Enhanced Functionality," <i>Current Opinion in Biotechnology</i> vol. 10: pp. 324-330 (1999).   |
|                     | DiCunto et al., "Citron Rho-Interacting Kinase, a Novel Tissue-Specific Ser/Thr Kinase Encompassing the Rho-Rac-Binding Protein Citron," <i>J. Biol. Chem.</i> vol. 273: pp. 29706-29711 (1998). |
|                     | DeRisi et al., <i>Nature Genetics</i> , 14:457-459 (1996)  |
|                     | DOE Joint Genome Institute, Genbank Accession Number AC008521, April 2000  |
|                     | Drees, Becky L., "Progress and Variation in Two-Hybrid and Three-Hybrid Technologies," <i>Current Opinion in Chemical Biology</i> vol. 3: pp. 64-70 (1999).                                      |
|                     | Edelman et al., "Obtaining a Functional Recombinant Anti-Rhesus (D) Antibody Using the Baculovirus-Insect Cell Expression System," <i>Immunology</i> vol. 91: pp. 13-19 (1997).                  |
|                     | Eldin et al., "High-Level Secretion of Two Antibody Single Chain Fv Fragments by <i>Pichia Pastoris</i> ," <i>Journal of Immunological Methods</i> vol. 201: pp. 67-75 (1997).                   |
|                     | Escude et al., "Padlock Oligonucleotides for Duplex DNA Base on Sequence-Specific Triple Helix Formation," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 96 no. 19: pp. 10603-10607 (1999).            |
|                     | Fashena et al., "The Continued Evolution of Two-Hybrid Screening Approaches in Yeast: How to Outwit Different Preys with Different Baits," <i>Gene</i> vol. 250: pp. 1-14 (2000).                |
|                     | Fields et al., "The Two-Hybrid System: an Assay for Protein-Protein Interactions," <i>Trends in Genetics</i> vol. 10 no. 8: pp. 286-292 (August 1994).   |
|                     | Finn et al., "Synthesis and Properties of DNA-PNA Chimeric Oligomers," <i>Nucleic Acids Research</i> vol. 24: pp. 3357-3363 (1996).  |
|                     | Fischer et al., "Molecular Farming of Recombinant Antibodies in Plants," <i>Biol. Chem.</i> vol. 380: pp. 825-839 (July/August 1999).  |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

**AEOMICA-11 CON**

SERIAL NO.

**10/663,470**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

APPLICANT

**Shannon et al.**

FILING DATE

**September 15, 2003**

GROUP

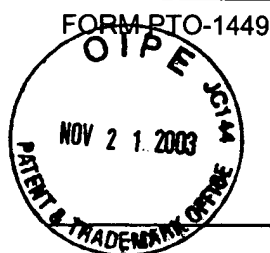
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |  |
|---------------------|--|
|                     | Fischer <i>et al.</i> , "Towards Molecular Farming in the Future: <i>Pichia Pastoris</i> -Based Production of Single-Chain Antibody Fragments," <i>Biotechnol. Appl. Biochem.</i> vol. 30: pp. 117-120 (1999).                         |
|                     | Fischer <i>et al.</i> , "Antibody Production by Molecular Farming in Plants," <i>Journal of Biological Regulators and Homeostatic Agents</i> vol. 14 no. 2: pp. 83-92 (2000).  |
|                     | Fischer <i>et al.</i> , "Towards Molecular Farming in the Future: Transient Protein Expression in Plants," <i>Biotechnol. Appl. Biochem.</i> vol. 30: pp. 113-116 (1999).  |
|                     | Flynn <i>et al.</i> , "Multiple Interactions of PRK1 with RhoA," <i>J. of Biol. Chem.</i> , 273(5): 2698-2705 (1998)   |
|                     | Fox, "Targeting DNA with Triplexes," <i>Current Medicinal Chemistry</i> vol. 7 no. 1: pp. 17-37 (2000).  |
|                     | Frenken <i>et al.</i> , "Recent Advances in the Large-Scale Production of Antibody Fragments Using Lower Eukaryotic Microorganisms," <i>Res. Immunol.</i> vol. 149: pp. 589-599 (1998).  |
|                     | Freyre <i>et al.</i> , "Very High Expression of an Anti-Carcinoembryonic Antigen Single Chain Fv Antibody Fragment in the Yeast <i>Pichia Pastoris</i> ," <i>Journal of Biotechnology</i> vol. 76: pp. 157-163 (2000).                 |
|                     | Fujisawa <i>et al.</i> , "Different Regions of Rho Determine Rho-Selective Binding of Different Classes of Rho Target Molecules," <i>J. of Biol. Chem.</i> vol. 273: pp. 18943-18949 (1998).   |
|                     | Fujita <i>et al.</i> , "Ropporin, a Sperm-Specific Binding Protein of Rhophilin, That is Localized in the Fibrous Sheath of Sperm Flagella," <i>Journal of Cell Science</i> vol. 113: pp. 103-112 (2000).                              |
|                     | Gamper <i>et al.</i> , "The DNA Strand of Chimeric RNA/DNA Oligonucleotides Can Direct Gene Repair/Conversion Activity in Mammalian and Plant Cell-Free Extracts," <i>Nucleic Acids Research</i> vol. 28 no. 21: pp. 4332-4339 (2000). |
|                     | Gautheret <i>et al.</i> , "Alternate Polyadenylation in Human mRNAs: A Large-Scale Analysis by EST Clustering," <i>Genome Research</i> vol. 8: pp. 524-530 (1998).   |
|                     | Gavilondo <i>et al.</i> , "Antibody Engineering at the Millennium," <i>Biotechniques</i> vol. 29: pp. 128-138 (2000).  |
|                     | Geysen <i>et al.</i> , "Use of Peptide Synthesis to Probe Viral Antigens for Epitopes to a Resolution of a Single Amino Acid," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 81: pp. 3998-4002 (1984).                                       |
|                     | Giddings <i>et al.</i> , "Transgenic Plants as Factories for Biopharmaceuticals," <i>Nature Biotechnology</i> vol. 18: pp. 1151-1155 (2000).   |
|                     | Gonnet <i>et al.</i> , "Exhaustive Matching of the Entire Protein Sequence Database," <i>Science</i> vol. 256 no. 5062: pp. 1443-1445 (1992).  |
|                     | Griffiths <i>et al.</i> , "Strategies for Selection of Antibodies by Phage Display," <i>Current Opinion in Biotechnology</i> vol. 9: pp. 102-108 (1998).   |
|                     | Hall, A., "Rho GTPases and the Actin Cytoskeleton," <i>Science</i> vol. 279: pp. 509-514 (1998).   |
|                     | Heid <i>et al.</i> , "Real Time Quantitative PCR," <i>Genome Research</i> vol. 6 no. 10: pp. 986-994 (1996).   |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEINFORMATION DISCLOSURE  
STATEMENT BY APPLICANTATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**APPLICANT  
**Shann n et al.**FILING DATE  
**September 15, 2003**

GROUP

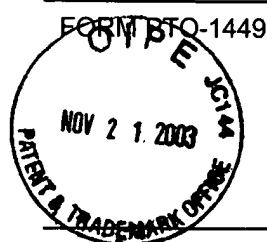
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |   |
|---------------------|---|
|                     | Heikal <i>et al.</i> , "Molecular Spectroscopy and Dynamics of Intrinsically Fluorescent Proteins: Coral red (dsRed) and Yellow (Citrine)," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 97: pp. 11996-12001 (2000).   |
|                     | Heim <i>et al.</i> , "Engineering Green Fluorescent Protein for Improved Brightness, Longer Wavelengths and Fluorescence Resonance Energy Transfer," <i>Current Biology</i> vol. 6: pp. 178-182 (1996).   |
|                     | Henegariu <i>et al.</i> , "Custom Fluorescent-Nucleotide Synthesis as an Alternative Method for Nucleic Acid Labeling," <i>Nature Biotechnology</i> vol. 18: pp. 345-348 (2000).  |
|                     | Henikoff <i>et al.</i> , "Amino Acid Substitution Matrices from Protein Blocks," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 89: pp. 10915-10919 (November 1992).   |
|                     | Holland <i>et al.</i> , "Detection of Specific Polymerase Chain reaction Product by Utilizing the 5' → 3' Exonuclease Activity of <i>Thermus Aquaticus</i> DNA Polymerase," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 88: pp. 7276-7280 (1991).   |
|                     | Hoogenboom <i>et al.</i> , "Antibody Phage Display Technology and its Applications," <i>Immunotechnology</i> , vol. 4: pp. 1-20 (1998).   |
|                     | Hoogenboom, "Designing and Optimizing Library Selection Strategies for Generating High-Affinity Antibodies," <i>Trends in Biotechnology</i> vol. 15: pp. 62-70 (February 1997).   |
|                     | Hsu <i>et al.</i> , "Coexpression of Molecular Chaperone BiP Improves Immunoglobulin Solubility and IgG Secretion from <i>Trichoplusia ni</i> Insect Cells," <i>Biotechnol. Prog.</i> vol. 13: pp. 96-104 (1997).   |
|                     | Hudson, "Recombinant Antibody Fragments," <i>Current Opinion in Biotechnology</i> vol. 9: pp. 395-402 (1998).   |
|                     | International Human Genome Sequencing Consortium, <i>Nature</i> vol. 409: pp. 860-921 (15 February 2001).   |
|                     | Jelsma <i>et al.</i> , "Increased Labeling of DNA Probes For <i>In Situ</i> Hybridization with the Universal Linkage System (ULS)," <i>Journal of NIH Research</i> vol. 5: p. 82 (1994).  |
|                     | Jin <i>et al.</i> , "High Resolution Functional Analysis of Antibody-Antigen Interactions," <i>J. Mol. Biol.</i> vol. 226: pp. 851-865 (1992).  |
|                     | Kochetkova <i>et al.</i> , "Triplex-Forming Oligonucleotides and Their Use in the Analysis of Gene Transcription," <i>Methods in Molecular Biology</i> vol. 130: pp. 189-201 (2000).  |
|                     | Kole <i>et al.</i> , "Protein-Tyrosine Phosphatase Inhibition by a Peptide Containing the Phosphotyrosyl Mimetic, L-O-Malonyltyrosine," <i>Biochemical &amp; Biophysical Research Communications</i> vol. 209 no. 3: pp. 817-821 (1995).  |
|                     | Kostrikis <i>et al.</i> , "Spectral Genotyping of Human Alleles," <i>Science</i> vol. 279: pp. 1228-1229 (1998).  |
|                     | Kozma <i>et al.</i> , "Rho Family GTPases and Neuronal Growth Cone Remodelling: Relationship Between Increased Complexity Induced by Cdc42Hs, Rac1, and Acetylcholine and Collapse Induced by RhoA and Lysophosphatidic Acid," <i>Molecular and Cellular Biology</i> vol. 17: p. 1201 (1997). |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEINFORMATION DISCLOSURE  
STATEMENT BY APPLICANTATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**APPLICANT  
**Shannon et al.**FILING DATE  
**September 15, 2003**

GROUP

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |   |
|---------------------|---|
|                     | Kricka <i>et al.</i> , "Comparison of 5-Hydroxy-2, 3-Dihydrophthalazine-1, 4-Dione and Luminol as Co-Substrates for Detection of Horseradish Peroxidase in Enhanced Chemiluminescent Reactions," <i>Journal of Immunoassay</i> vol. 17: pp. 67-83 (1996). |
|                     | Kuimelis <i>et al.</i> , "Structural Analogues of TaqMan Probes for Real-Time Quantitative PCR," <i>Nucleic Acids Symposium Series</i> no. 37: pp. 255-256 (1997).  |
|                     | Lander <i>et al.</i> , "The Chipping Forecast," <i>Supplement to Nature Genetics</i> vol. 21 no. 1: pp. 1-60 (January 1999).  |
|                     | Larsen <i>et al.</i> , "Antisense Properties of Peptide Nucleic Acid," <i>Biochimica et Biophysica Acta</i> 1489: pp. 159-166 (1999).   |
|                     | Lauffer <i>et al.</i> , "MS-325: Albumin-Targeted Contrast Agent for MR Angiography," <i>Radiology</i> vol. 207 no. 2: pp. 529-538 (1998).  |
|                     | Lerner, "Tapping the Immunological Repertoire to Produce Antibodies of Predetermined Specificity," <i>Nature</i> vol. 299: pp. 592-596 (1982).  |
|                     | Li <i>et al.</i> , "Deletions of the <i>Aequorea Victoria</i> Green Fluorescent Protein Define the Minimal Domain Required for Fluorescence," <i>J. of Biol. Chem.</i> vol. 272: pp. 28545-28549 (1997).  |
|                     | Li <i>et al.</i> , "Production of Functional Antibodies Generated in a Nonlytic Insect Cell Expression System," <i>Protein Expression and Purification</i> vol. 21: pp. 121-128 (2001).   |
|                     | Liu <i>et al.</i> , "Progress Toward the Evolution of an Organism with an Expanded Genetic Code," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 96: pp. 4780-4785 (1999).   |
|                     | Lizardi <i>et al.</i> , "Mutation Detection and Single-Molecule Counting Using Isothermal Rolling-Circle Amplification," <i>Nature Genetics</i> vol. 19: pp. 225-232 (1998).  |
|                     | Luban <i>et al.</i> , "The Yeast Two-Hybrid System for Studying Protein-Protein Interactions," <i>Current Opinions in Biotechnology</i> vol. 6: pp. 59-64 (1995).   |
|                     | Lundqvist <i>et al.</i> , "Influence of Different Luminols on the Characteristics of the Chemiluminescence Reaction in Human Neutrophils," <i>J. Biolumin. Chemilumin.</i> vol. 10: pp. 353-359 (1995).   |
|                     | Ma <i>et al.</i> , "Plant Antibodies for Immunotherapy," <i>Plant Physiology</i> vol. 109: pp. 341-346 (1995).  |
|                     | Marinissen <i>et al.</i> , "Regulation of Gene Expression by the Small GTPase Rho Through the ERK6 (p38lambda) MAP Kinase Pathway," <i>Genes &amp; Development</i> vol. 15: pp. 535-553 (2001).   |
|                     | Marras <i>et al.</i> , "Multiplex Detection of Single-Nucleotide Variations Using Molecular Beacons," <i>Genetic Analysis: Biomolecular Engineering</i> vol. 14: pp. 151-156 (1999).  |
|                     | Mendelsohn <i>et al.</i> , "Applications of Interaction Traps/Two-Hybrid Systems to Biotechnology Research," <i>Current Opinion in Biotechnology</i> vol. 5: pp. 482-486 (1994).  |
|                     | Merchant <i>et al.</i> , "Recent Advancements in Surface-Enhanced Laser Desorption/Ionization-Time of Flight-Mass Spectrometry," <i>Electrophoresis</i> vol. 21: pp. 1164-1177 (2000).  |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**APPLICANT  
**Shannon et al.**FILING DATE  
**September 15, 2003**

GROUP

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |  |
|---------------------|--|
|                     | Merk <i>et al.</i> , "Cell-Free Expression of Two Single-Chain Monoclonal Antibodies Against Lysozyme: Effect of Domain Arrangement on the Expression," <i>J. Biochem.</i> vol. 125 no. 2: pp. 328-33 (1999).                    |
|                     | Misra <i>et al.</i> , "Polyamide Nucleic Acid-DNA Chimera Lacking the Phosphate Backbone Are Novel Primers for Polymerase Reaction Catalyzed by DNA Polymerases," <i>Biochemistry</i> vol. 37: pp. 1917-1925 (1998).             |
|                     | Miyawaki <i>et al.</i> , "Fluorescent Indicators for CA <sup>2+</sup> Based on Green Fluorescent Proteins and Calmodulin," <i>Nature</i> vol. 388: pp. 882-887 (1997).   |
|                     | Morrison <i>et al.</i> , "Chimeric Human Antibody Molecules: Mouse Antigen-Binding Domains with Human constant Region Domains," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 81: pp. 6851-6855 (1984).                                |
|                     | Nesbit <i>et al.</i> , "Production of a Functional Monoclonal Antibody Recognizing Human Colorectal Carcinoma Cells from a Baculovirus Expression System," <i>Journal of Immunological Methods</i> vol. 151: pp. 201-208 (1992). |
|                     | Nielsen, "Peptide Nucleic Acids as Therapeutic Agents," <i>Current Opinion in Structural Biology</i> vol. 9: pp. 353-357 (1999).   |
|                     | Nielsen, "Applications of Peptide Nucleic Acids," <i>Current Opinion in Biotechnology</i> vol. 10: pp. 71-75 (1999).   |
|                     | Nielsen <i>et al.</i> , "Peptide Nucleic Acids: On the Road to New Gene Therapeutic Drugs," <i>Pharmacology &amp; Toxicology</i> vol. 86: pp. 3-7 (2000).  |
|                     | Nilsson <i>et al.</i> , "Padlock Probes: Circularizing Oligonucleotides for Localized DNA Detection," <i>Science</i> vol. 265 no. 5181: pp. 2085-2088 (1994).  |
|                     | Ormö <i>et al.</i> , "Crystal Structure of the <i>Aequorea Victoria</i> Green Fluorescent Protein," <i>Science</i> vol. 273: pp. 1392-1395 (1996).   |
|                     | Palm <i>et al.</i> , "Spectral Variants of Green Fluorescent Protein," <i>Methods in Enzymology</i> vol. 302: pp. 378-394 (1999).  |
|                     | Penn <i>et al.</i> , "Mining the Human Genome Using Microarrays of Open Reading Frames," <i>Nature Genetics</i> vol. 26: pp. 315-318 (2000).   |
|                     | Pennell <i>et al.</i> , "In Vitro Production of Recombinant Antibody Fragments in <i>Piscia Pastoris</i> ," <i>Research in Immunology</i> vol. 149 no. 6: pp. 599-603 (1998).  |
|                     | Pollock <i>et al.</i> , "Transgenic Milk as a Method for the Production of Recombinant Antibodies," <i>Journal of Immunological Methods</i> vol. 231: pp. 147-157 (1999).  |
|                     | Posnett <i>et al.</i> , "A Novel Method for Producing Anti-Peptide Antibodies," <i>J. of Biol. Chem.</i> vol. 263: pp. 1719-1725 (1988).   |
|                     | Praseuth <i>et al.</i> , "Triple Helix Formation and the Antigene Strategy for Sequence-Specific Control of Gene Expression," <i>Biochimica et Biophysica Acta</i> 1489: pp. 181-206 (1999).                                     |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.



FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANTAPPLICANT  
**Shann n et al.**FILING DATE  
**September 15, 2003**

GROUP

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |   |
|---------------------|---|
|                     | Prokopenko <i>et al.</i> , "Untying the Gordian Knot of Cytokinesis: Role of Small G Proteins and Their Regulators," <i>Journal of Cell Biology</i> vol. 148: pp. 843-848 (2000).   |
|                     | Rader <i>et al.</i> , "Phase Display of Combinatorial Antibody Libraries," <i>Current Opinion in Biotechnology</i> vol. 8: pp. 503-508 (1997).  |
|                     | Ray <i>et al.</i> , "Peptide Nucleic Acid (PNA): Its Medical and Biotechnical Applications and Promise for the Future," <i>FASEB Journal</i> vol. 14 no. 9: pp. 1041-1060 (2000).   |
|                     | Reid <i>et al.</i> , "Rhotekin, a New Putative Target for Rho Bearing Homology to a Serine/Threonine Kinase, PKN, and Rhophilin in the Rho-Binding Domain," <i>Journal of Biol. Chem.</i> vol. 271: pp. 13558-13560 (1996). |
|                     | Ridley, A.J., "The GTP Binding Protein Rho," <i>Int. J. Biochem. Cell Biol.</i> vol. 29: pp. 1225-1229 (1997).  |
|                     | Riechmann <i>et al.</i> , "Reshaping Human Antibodies for Therapy," <i>Nature</i> vol. 332: pp. 323-327 (24 March 1988).  |
|                     | Russell, D.A., "Feasibility of Antibody Production in Plants for Human Therapeutic Use," <i>Current Topics in Microbiology &amp; Immunology</i> vol. 240: pp. 119-38 (1999).  |
|                     | Ryabova <i>et al.</i> , "Functional Antibody Production Using Cell-Free Translation: Effects of Protein Disulfide Isomerase and Chaperones," <i>Nature Biotechnology</i> vol. 15: pp. 79-84 (1997).                         |
|                     | Sambrook <i>et al.</i> , "Expression of Cloned Genes in <i>E. coli</i> ", <i>Molecular Cloning</i> , (1992)   |
|                     | Schiestl <i>et al.</i> , "High Efficiency Transformation of Intact Yeast Cells Using Single Stranded Nucleic Acids as a Carrier," <i>Current Genetics</i> vol. 16 nos.5 & 6: pp. 339-346 (1989).                            |
|                     | Schmitz <i>et al.</i> , "Rho GTPases: Signaling, Migration, and Invasion," <i>Experimental Cell Research</i> vol. 261: pp. 1-12 (2000).   |
|                     | Schoner <i>et al.</i> , "Translation of a Synthetic Two-Cistron mRNA in <i>Escherichia coli</i> ," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 83: pp. 8506-8510 (1986).  |
|                     | Schweitzer <i>et al.</i> , "Combining Nucleic Acid Amplification and Detection," <i>Current Opinion in Biotechnology</i> vol. 12 no. 1: pp. 21-27 (2001).   |
|                     | Scott <i>et al.</i> , "Cellular Camouflage: Fooling the Immune System with Polymers," <i>Current Pharmaceutical Design</i> vol. 4: pp. 423-438 (1998).  |
|                     | Sharon <i>et al.</i> , "Expression of a VHCK Chimaeric Protein in Mouse Myeloma Cells," <i>Nature</i> vol. 309: pp. 364-367 (1984).   |
|                     | Shinnick <i>et al.</i> , "Synthetic Peptide Immunogens as Vaccines," <i>Annual Review of Microbiology</i> vol. 37: pp. 425-446 (1983).  |
|                     | Shusta <i>et al.</i> , "Increasing the Secretory Capacity of <i>Saccharomyces Cerevisiae</i> for Production of Single-Chain Antibody Fragments," <i>Nature Biotechnology</i> vol. 16: pp. 773-777 (August 1998).            |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANTAPPLICANT  
**Shann n et al.**FILING DATE  
**September 15, 2003**

GROUP

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |   |
|---------------------|---|
|                     | Sidhu, Sachdev S., "Phage Display in Pharmaceutical Biotechnology," <i>Current Opinion in Biotechnology</i> vol. 11: pp. 610-616 (2000).  |
|                     | Sonstegard et al., Genbank Accession Number BE478809, August 2000   |
|                     | Sokol et al., "Real Time Detection of DNA-RNA Hybridization in Living Cells," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 95: pp. 11538-11543 (1998).   |
|                     | Sutcliffe et al., "Antibodies that React with Predetermined Sites on Proteins," <i>Science</i> vol. 219: pp. 660-666 (1983).  |
|                     | Takahashi et al., "Production of Humanized Fab Fragment Against Human High Affinity IgE Receptor in <i>Pichia Pastoris</i> ," <i>Biosci. Biotechnol. Biochem.</i> vol. 64 no. 10: pp. 2138-2144 (2000). |
|                     | Takai Y. et al., "Small GTP Binding Proteins," <i>Physiological Review</i> vol. 18: pp. 153-208 (2001).   |
|                     | Takeda et al., "Construction of Chimaeric Processed Immunoglobulin Genes Containing Mouse Variable and Human constant Region Sequences," <i>Nature</i> vol. 314: pp. 452-454 (April 1985).              |
|                     | Tam et al., "Synthetic Peptide Vaccine Design: Synthesis and Properties of a High-Density Multiple Antigenic Peptide System," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 85: pp. 5409-5413 (1988).         |
|                     | Tatiana et al., "Blast 2 Sequences - A New Tool for Comparing Protein and Nucleotide Sequences," <i>FEMS Microbiology Letters</i> vol. 174: pp. 247-250 (1999).   |
|                     | Thorpe et al., "Bioluminescence and Chemiluminescence," <i>Methods in Enzymology</i> vol. 133: pp. 331-353 (1986).  |
|                     | Topcu et al., "The Yeast Two-Hybrid System and Its Pharmaceutical Significance," <i>Pharmaceutical Research</i> vol. 17 no. 9: pp. 1049-1055 (2000).  |
|                     | Tyagi et al., "Molecular Beacons: Probes that Fluoresce upon Hybridization," <i>Nature Biotechnology</i> vol. 14: pp. 303-308 (1996).   |
|                     | Tyagi et al., "Multicolor Molecular Beacons for Allele Discrimination," <i>Nature Biotechnology</i> vol. 16: pp. 49-53 (1998).  |
|                     | Van Belkum et al., "Non-Isotopic Labeling of DNA by Newly Developed Hapten-Containing Platinum Compounds," <i>BioTechniques</i> vol. 16: pp. 148-153 (1994).  |
|                     | Verma et al., "Antibody Engineering: Comparison of Bacterial, Yeast, Insect and Mammalian Expression Systems," <i>Journal of Immunological Methods</i> vol. 216: pp. 165-81 (1998).                     |
|                     | Watanbe et al., "Protein Kinase N (PKN) and PKN-Related Protein Rhophilin as Targets of Small GTPase Rho," <i>Science</i> vol. 271: pp. 645-648 (1996).   |
|                     | Weiss et al., "Rapid Mapping of Protein Functional Epitopes by Combinatorial Alanine Scanning," <i>Proc. Nat'l. Acad. Sci. USA</i> vol. 97: pp. 8950-8954 (2000).                                       |
|                     | Winter et al., "Making Antibodies by Phage Display Technology," <i>Annual Review of Immunology</i> : pp. 433-455 (1994).  |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
**AEOMICA-11 CON**SERIAL NO.  
**10/663,470**APPLICANT  
**Shannon et al.**FILING DATE  
**September 15, 2003**

GROUP

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER<br>INITIAL |  |
|---------------------|--|
|                     | Wu et al., Genbank Accession Number AC025267, October 2000; submitted March 2000                                   |
|                     | A printout of the web page describing the "EZ-Detect Rho Activation Kit" from Pierce Biotechnology                 |
|                     | A printout of the web page describing "Rhotekin-RBD Protein GST Beads" from Cytoskeleton, Inc.                     |
|                     | A printout of the web page describing "Rhotekin Rho Binding Domain, agarose" from Upstate Cell Signaling Solutions |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not conformance and not considered. Include copy of this form with next communication to applicant.